

IN THE CLAIMS:

The text of all pending claims are set forth below. Cancelled and withdrawn claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (previously amended), (cancelled), (withdrawn), (new), (previously added), (reinstated - formerly claim #), (previously reinstated), (re-presented - formerly dependent claim #) or, (previously re-presented).

Please AMEND the claims in accordance with the following:

1-55. (Cancelled)

56. (New) A push service system comprising:

a plurality of data servers, at least one agent, and a plurality of user terminals, all connected to a network using an Internet protocol, wherein

each of the data servers is configured to store information and to push-transmit update information related to updating of the information to the at least one agent serving as a substitute for the user terminals connected via the network, the push-transmit being responsive to the information having been updated in the data server;

the at least one agent is configured to receive the update information and to transmit via the network the update information to one or more of the user terminals if the update information relates to information that has been registered in the at least one agent as being requested by the one or more of the user terminals; and

the one or more of the user terminals are configured to receive the update information transmitted from the at least one agent and to obtain the information updated.

57. (New) The push service system according to claim 56, wherein the one or more of the user terminals are configured to access via the network the data server which has transmitted the update information so as to obtain the information updated.

58. (New) The push service system according to claim 56, wherein the at least one agent comprises a plurality of subagents in a subnetwork connected to the network, and the user terminals register themselves into the subagents, and each of the subagents serves as a substitute of corresponding user terminals of the user terminals, the corresponding user terminals that have registered themselves into the each of the plurality of subagents.

59. (New) The push service system according to claim 58, wherein a representative agent is provided between the network and the subnetwork, and the representative agent relays between the data servers and at least one of the subagents and between the user terminals and at least one of the subagents.

60. (New) The push service system according to claim 56, wherein
the at least one agent is locally connected to at least one provider connected to the network,
the user terminals are connected to the at least one provider, and
the data servers transmit the update information or the information updated to the at least one agent via the at least one provider, and the at least one agent transmits at least one of the update information and the information updated to the user terminals via the at least one provider.

61. (New) The push service system according to claim 60, wherein
the at least one provider comprises a plurality of providers having a hierarchical relationship among each other, and each including the at least one agent,
the user terminals and a lower agent of the agents that is directly connected to a lower provider in a hierarchy lower than a hierarchy of an upper provider of the providers register information about the user terminals and about which information is requested into an upper agent connected directly to the upper provider, and
the upper agent transmits, to the lower agent connected to lower user terminals of the user terminals, the lower user terminals that have requested at least one of the update information and the information updated, the update information updated transmitted from the data servers.

62. (New) The push service system according to claim 56, wherein the at least one agent transmits via another network different from the network at least one of the update information and the information updated, to the user terminals registered.

63. (New) The push service system according to claim 56, wherein the at least one agent has a table listing data servers that provide information, and when the at least one agent is notified by a data server not registered in the table that the information is going to be provided from the data server the at least one agent registers the data server into the table.

64. (New) The push service system according to claim 56, wherein the at least one agent further has data type management information for managing the information per data type, and when the at least one agent receives a notification made by one of the data servers about what kind of management is carried out on the information managed by the one of the data servers, the at least one agent adds or deletes the one of the data servers from the data type management information based on the notification.

65. (New) The push service system according to claim 64, wherein when the at least one agent receives a notification made by one of the data servers about addition or deletion of information of a data type of the information managed by the one of the data servers, the at least one agent adds or deletes the data server/servers related to the data type to or from the data type management information.

66. (New) The push service system according to claim 64, wherein when the information of the data type of the information managed by the at least one agent is changed the at least one agent notifies the user terminals of the change.

67. (New) The push service system according to claim 66, wherein
the at least one agent manages the data types such that the data types have a
hierarchical relationship among each other, and
when information of one of the data types is changed the at least one agent notifies of
the change to a user terminal of the user terminals which has been registered to receive a lower
data type having a hierarchy lower than a hierarchy of the one of the data types changed.

68. (New) The push service system according to claim 56, wherein
the at least one agent accesses via the network the data server which has transmitted
the update information so as to obtain the information updated and transmits via the network the
information updated to the one or more of the user terminals, and
the user terminals are configured to receive the information updated from the at least one
agents so as to obtain the information updated.

69. (New) The push service system according to claim 56, wherein
each of the data servers transmits the information updated instead of the update
information to the at least one agent,
the at least one agent receives the information transmitted by the data servers, and if the
information received has been registered in the at least one agent as requested information
requested by one or more of the user terminals, transmits the information received to the one or
more of the user terminals via the network, and
the one or more of the user terminals receive the information transmitted by the at least
one agent so as to obtain the information updated.

70. (New) A push service processing method, comprising:
registering information about a user terminal connected to a network using an Internet
protocol and information requested by the user terminal into an agent which is connected to the
network and serves as a substitute for the user terminal;
push-transmitting, from a data server which is connected to the network and stores
information, update information related to updating of the data server's information responsive to
detection of the information having been updated in the data server, to the agent via the network;

transmitting from the agent the update information to the user terminal via the network if the update information has been requested as indicated by the registering of information about the user terminal; and

receiving at the user terminal the update information transmitted from the agent and obtaining at the user terminal the information updated via the network.

71. (New) The push service processing method according to claim 70, wherein the user terminal accesses the data server via the network so as to obtain the information updated.

72. (New) The push service processing method according to claim 70, wherein the agent transmits via another network different from the network at least one of the update information and the information updated, to the user terminal registered.

73. (New) The push service processing method according to claim 70, wherein the agent has a table listing data servers that provide information, and when the agent is notified by a data server not registered in the table that the information is going to be provided from the data server the agent registers the data server into the table.

74. (New) The push service processing method according to claim 70, wherein the agent further has data type management information for managing the information per data type, and

when the agent receives a notification made by the data server about what kind of management is carried out on the information managed by the data server, the agent adds or deletes the data server from the data type management information based on the notification.

75. (New) The push service processing method according to claim 70, wherein when the agent receives a notification made by the data server about addition or deletion of information of a data type of the information managed by the data server, the agent adds or deletes the data server or data servers related to the data type to or from the data type management information.

76. (New) The push service processing method according to claim 70, wherein when the information of the data type of the information managed by the agent is changed the agent notifies the user terminal of the change.

77. (New) The push service processing method according to claim 76, wherein the agent manages the data types such that the data types have a hierarchical relationship among each other, and
when information of one of the data types is changed the agent notifies of the change to the user terminal which has been registered to receive a lower data type having a hierarchy lower than a hierarchy of the one of the data types changed.

78. (New) The push service processing method according to claim 70, wherein the agent accesses the data server via the network so as to obtain the information updated, and the user terminal receives from the agent the update information and the information updated.

79. (New) The push service processing method according to claim 70, comprising:
transmitting from the data server the information updated instead of the update information to the agent;
receiving at the agent the information transmitted by the data server, and if the information received has been registered in the agent as requested information requested by the user terminal, transmitting from the agent the information received to the user terminal via the network, and
receiving at the user terminal the information transmitted by the agent so as to obtain the information updated.

80. (New) A network-based push processing intermediary agent in a volatile or nonvolatile storage, the intermediary agent configured to perform a process, the process comprising:

receiving over the network at the intermediary agent registrations from clients, the registrations indicating different types of information of interest to different clients, whereby a client registers with the intermediary agent its respective information type;

at the intermediary agent, receiving update notices pushed over the network from the information servers, where the update notices are pushed from the information servers responsive to such servers having detected that their served information has been updated, and where the update notices indicate respective types of information updated at the information servers;

receiving the update notices at the intermediary agent and using the update notices and the prior registrations to determine which clients are to be notified of which information server updates; and

at the intermediary agent, notifying the determined clients of the relevant updates at the information servers, whereby update detection on the information servers causes clients to be notified of updates without requiring the clients to first send information requests to the information servers.
